

S.No. 165

12PBT06

(For the candidates admitted from 2012–2013 onwards)

M.Sc. DEGREE EXAMINATION, APRIL/MAY 2018.

Third Semester

Biotechnology

PLANT BIOTECHNOLOGY

Time : Three hours

Maximum : 75 marks

SECTION A — (5 × 5 = 25 marks)

Answer ALL the questions.

1. (a) What are the steps involved in callus initiation?

Or

- (b) What are the facilities required to develop a tissue culture lab?

2. (a) Explain Somatic Embryogenesis.

Or

- (b) Write a note on haploids.

3. (a) Explain Gene silencing.

Or

(b) Briefly explain the physical methods of transformation.

4. (a) Explain the mode of action of insect resistance plants.

Or

(b) Write a note on plant viral vectors.

5. (a) Explain the role of plant tissue culture in horticulture.

Or

(b) What are the strategies involved in *IN SITU* conservation?

SECTION B — (5 × 10 = 50 marks)

Answer ALL the questions.

6. (a) Discuss about the different types of media.

Or

(b) Explain in detail about Artificial seed production.

7. (a) Give an account on protoplast isolation and fusion techniques.

Or

(b) Explain the process of micro propagation.

8. (a) Discuss about Molecular Markers with special emphasize on RFLP.

Or

(b) Write a note on Chloroplast genome organization.

9. (a) Explain in detail about plant pathogen interaction.

Or

(b) What are Transposable elements? Give its significance in plants.

10. (a) Give a broad outline on the applications of Biotechnology in forestry.

Or

(b) Explain the copy rights and trademarks involved in transgenic plant commercialization.